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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/720,216	11/25/2003	Toshiya Yuasa	03560.003402	4985

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EXAMINER

CORDRAY, DENNIS R

ART UNIT	PAPER NUMBER
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1731

DATE MAILED: 08/09/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	Application No. 10/720,216	Applicant(s) YUASA, TOSHIYA	
	Examiner Dennis Cordray	Art Unit 1731	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-4 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-4 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☐ All    b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |  |
|--|--|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. ____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)            |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date <u>1/7/2004, 11/8/2004</u> | 6) <input type="checkbox"/> Other: ____  |

**DETAILED ACTION**

This is a first action on the merits of Application SN 10/720,216.

***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

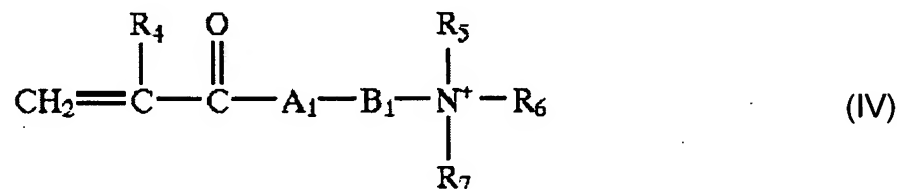
A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

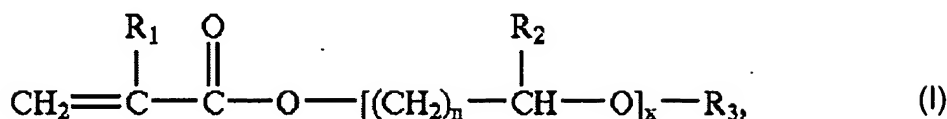
(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

1. Claims 1 and 2 are rejected under 35 U.S.C. 102(b) as being anticipated by either Struck et al (US 2003/0212183) or Hallstrom et al (US 2002/0139502).

Struck et al discloses a composition containing a copolymer (Par 11, 12, 27 and 28) made from monomers comprising the structure represented by general formula (IV),



wherein R<sub>4</sub> is hydrogen or methyl, R<sub>5</sub>, R<sub>6</sub> and R<sub>7</sub> are, independently from each other, any of hydrogen, C<sub>1</sub>-C<sub>8</sub> alkyl or benzyl, A<sub>1</sub> is NH or O, B<sub>1</sub> is C<sub>1</sub>-C<sub>2</sub> alkyl or C<sub>1</sub>-C<sub>2</sub> hydroxyalkyl;  
and the structure represented by general formula (I);

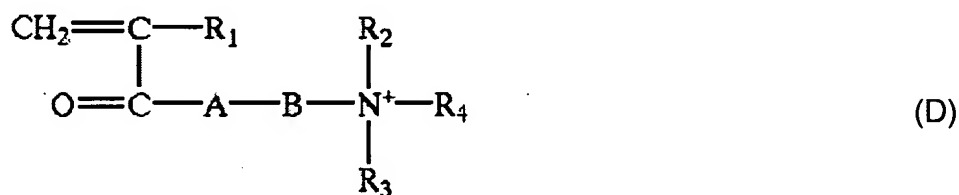


wherein  $\text{R}_1$  is hydrogen or methyl,  $\text{R}_2$  is hydrogen or  $\text{C}_1$ - $\text{C}_2$  alkyl,  $\text{R}_3$  is hydrogen,  $\text{C}_1$ - $\text{C}_4$  alkyl, phenyl, or benzyl,  $n=1$  to  $4$ , and  $x=1$  to  $50$ .

In the above disclosed formulae (IV) and (I), if  $\text{R}_1$ ,  $\text{R}_2$  and  $\text{R}_4$  are H,  $\text{R}_3$  and  $\text{R}_{5-7}$  are alkyl,  $n=1$ ,  $x \leq 3$ ,  $\text{A}_1$  is O and  $\text{B}_1$  is  $\text{C}_2$  alkyl, then the repeating units in a copolymer made from the formulae (IV) and (I) above become the claimed repeating units (1) and (2) of the instant invention.

Struck et al further discloses the molar ratio, IV:I, of 80:20 to 99.9:0.1 (Par 28-29). On a weight basis using the most conservative molecular weights possible based on the disclosed structures, the ratio of IV:I becomes about 71:29 to 99.98:0.02. This compositional range substantially overlaps the claimed range. Therefore Struck anticipates the claims.

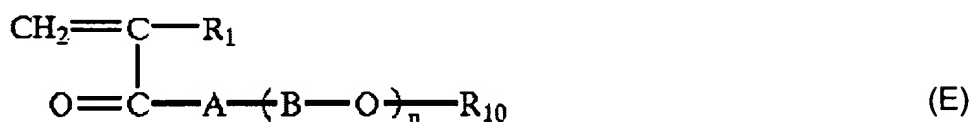
Hallstrom et al discloses a copolymer (Pars 7, 8, 15 and 16) made from monomers comprising the structure represented by general formula (D),



wherein  $\text{R}_1$  is H or  $\text{CH}_3$ ,  $\text{R}_2$  and  $\text{R}_3$  are each hydrogen or a  $\text{C}_1$ - $\text{C}_3$  alkyl group, A is O or NH, B is an alkylene group of from 2 to 8 carbon atoms or a hydroxy propylene group,

Art Unit: 1731

and R<sub>4</sub> is a substituent containing a hydrophobic group, suitably non-aromatic hydrocarbon group containing at least 2 carbon atoms;  
and the structure represented by general formula (E),



wherein R<sub>1</sub> is H or CH<sub>3</sub>; A is O or NH; B is an alkylene group of from 2 to 4 carbon atoms, n is an integer of at least 1, R<sub>10</sub> is a substituent containing a hydrophobic group, suitably alkyl, having at least 2 carbon atoms.

In the above disclosed formulae (D) and (E), if R<sub>1</sub> is H, R<sub>3</sub> and R<sub>4</sub> is an alkyl group, n=1-3, A is O and B is a C<sub>2</sub> alkyl group, then the repeating units in a copolymer made from the formulae (D) and (E) above become the claimed repeating units (1) and (2) of the instant invention.

Hallstrom further discloses the molar ratio of the two monomers A and B from 1:99 to 99:1 (Par 18). This compositional range encompasses the claimed range. Therefore Hallstrom anticipates the claims.

The copolymers disclosed by either Struck et al or Hallstrom et al, when added to the suspension, are capable of functioning as internal sizing agents because, where the claimed and prior art apparatus or product are identical or substantially identical in structure or composition, a *prima facie* case of either anticipation or obviousness has been established. *In re Best*, 562 F.2d 1252, 1255, 195 USPQ 430, 433 (CCPA 1977).

Art Unit: 1731

In other words, when the structure recited in the reference is substantially identical to that of the claims, the claimed properties or functions are presumed to be inherent.

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 3 and 4 are rejected under 35 U.S.C. 103(a) as being unpatentable over Struck et al (US 2003/0212183) or Hallstrom et al (US 2002/0139502).

Neither Struck et al nor Hallstrom et al disclose a recording sheet formed using the disclosed copolymer; however, both references disclose using the disclosed copolymers in a papermaking process, by adding them to a suspension which includes cellulosic fibers, corresponding to the claimed "fibrous pulps", and fillers (see Struck: par 38, Hallstrom: abstract). Therefore, it would have been obvious at the time the invention was made to a person with ordinary skill in the art to make a paper comprising the copolymer of Struck et al or Hallstrom et al, fibrous pulp and fillers, since such is envisioned by both references. Further, the paper so formed is capable of functioning as a "recording sheet" because, where the claimed and prior art apparatus or product are identical or substantially identical in structure or composition, a *prima facie* case of either anticipation or obviousness has been established. *In re Best*, 562 F.2d 1252, 1255, 195 USPQ 430, 433 (CCPA 1977). In other words, when the structure recited in

Art Unit: 1731

the reference is substantially identical to that of the claims, the claimed properties or functions are presumed to be inherent.

### ***Conclusion***

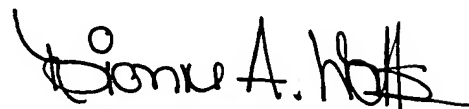
The prior art made of record and not relied upon is considered pertinent to applicant's disclosure [Nzudie et al (6221957) and Tsujihata et al (US 2004/0241347)]. They disclose other compositions similar to that claimed in the instant invention and a recording paper with good ink receptivity and light fastness.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Dennis Cordray whose telephone number is 571-272-8244. The examiner can normally be reached on M - F, 7:30 -4:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Steven Griffin can be reached on 571-272-1189. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

  
DRC

  
**DIONNE A. WALLS**  
**PRIMARY EXAMINER**